

## New genera for two polychaetes of Lepidonotinae

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*Abstract.*—Among the Lepidonotinae, two species of *Lepidonotus* are referred to new genera: *L. dictyolepis* Haswell, from Australia, to *Augenerilepidonotus*, and *L. kumari* Rullier, from Malaya, to *Olgalepidonotus*.

As part of an on-going study on the polynoid polychaetes, two species that were described under *Lepidonotus* Leach, 1816, *L. dictyolepis* Haswell, 1883, from Australia, and *L. kumari* Rullier, 1970, from Malaya, show differences from *Lepidonotus* and are referred to two new genera: *Augenerilepidonotus*, for the first species, and *Olgalepidonotus*, for the second species.

The specimens examined in this report were received on loan from the Australian Museum, Sydney (AMS), through Elizabeth Pope, Pat Hutchings, and Neville Coleman; from the Western Australian Museum, Perth, through R. W. George; and from Professor Francois Rullier, Laboratoire de Zoologie, Angers, France (LZA).

Family Polynoidae Kinberg, 1856  
Subfamily Lepidonotinae Willey, 1902  
*Augenerilepidonotus*, new genus

*Type species.*—*Lepidonotus dictyolepis* Haswell, 1883. Gender: masculine.

*Diagnosis.*—Body short, flattened, subrectangular, with 26 segments (first achaetous). Elytra and prominent elytriphores 12 pairs, on segments 2, 4, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23. Elytra large, oval, overlapping, with surfaces mostly covered with chitinous irregular polygonal areas enclosing small secondary areolae, with some spinous microtubercles and lateral fringes of short, wide papillae. Dorsal cirri on non-

elytrigerous segments, with bulbous cirrophores and short styles; dorsal tubercles indistinct. Prostomium bilobed, lepidonotoid, with 3 antennae, 2 palps, and 2 pairs of eyes; median antenna with bulbous ceratophore in anterior notch of prostomium; lateral antennae inserted terminally on anterior extensions of prostomium. First or tentacular segment not visible dorsally; tentaculophores lateral to prostomium, achaetous, with 2 pairs of dorsal and ventral tentacular cirri, with bulbous upper lip and small indistinct facial tubercle. Second segment with first pair of elytriphores, biramous parapodia, and long ventral buccal cirri. Biramous parapodia with small, conical notopodia on anterodorsal faces of larger neuropodia; neuropodia with subconical pre-setal lobe and shorter, rounded postsetal lobe, deeply cut dorsally and ventrally. Notosetae numerous, slender, densely serrated, short, extending only slightly beyond tips of neuropodia, much more slender than neurosetae; few short, tapering to blunt tips and numerous, long, tapering to capillary tips. Neurosetae stout, relatively few (8–12), with few spinous rows (4–5), and curved unidentate tips. Ventral cirri short, subulate. Pygidium with anal ridge and pair of anal cirri. Nephridial papillae small, bulbous, beginning on segment 8. Pharynx (?) not extended.

*Etymology.*—The genus is named for Herman Augener (1927), whose description and figures of a specimen of *Lepidonotus dictyolepis*, from near the type local-

ity, supplemented Haswell's original description.

*Remarks.*—*Augenerilepidonotus dictyolepis* differs from other species of *Lepidonotus* by the presence of chitinous polygonal areas on the elytra. Among the Polynoidae, similar types of elytra with chitinous polygonal areas are found in the Iphioninae Baird, including *Iphione* Kinberg, *Iphionides* Hartmann-Schroder, and *Iphionella* McIntosh (See Pettibone 1986, Hanley & Burke 1991), and in Harmothoinae, including *Gaudichaudius* Pettibone, 1986.

*Augenerilepidonotus dictyolepis*  
(Haswell, 1883), new combination  
Fig. 1

*Lepidonotus dictyolepis* Haswell, 1883, 287, pl. 9: figs. 7,8.—Augener, 1927:94, fig. 3a-c.—Not Fauvel, 1932:14 (Gulf of Manaar).—Rullier, 1972:29.—Day, 1975: 178, fig. 1m-q.—Averincev, 1978:69.—Hanley & Burke, 1990:218, fig. 7A-J.—Hanley, 1993:314.

?*Lepidonotus aeololepis* Haswell, 1883: 286, pl. 9: figs. 3–5.

*Material examined.*—Australia, New South Wales: Watson's Bay, Fort Jackson, Sydney, dredged in shallow water, early June, 2 syntypes of *L. dictyolepis* (AMS G11274).

Western Australia: Cockburn Sound, Harding Rock, east side of Garden Island, burrowed 5–7 inches into old coralline limestone, and Parmelia Bay, 1.6 km west of Woodman Point, washings from *Pinna* shells with *Caulerpa*, 2–3 m, 6/13 Feb 1972, B. R. Wilson, coll., 3 specimens (WAM 43-72; ident. Day, 1975). Hall's Bank, Fremantle, rubble, 8 m, 13 Apr 1972, N. Coleman, coll., 1 specimen (AMS W-5491).

*Description.*—Body with 26 segments, 7–12 mm long, 3–4.5 mm wide with setae. Elytra with most of surface covered with irregular polygonal areas, enclosing secondary areolae, larger centrally, smaller periph-

erally, with some smaller areolae, microtubercles, and short, stout papillae near external borders (Fig. 1G, H; Augener 1927: fig. 3a, b; Day 1975: fig. 1n, o; Hanley & Burke 1990: fig. 7A–D). Elytrophores large, bulbous (Fig. 1A, C). Dorsal cirri with cylindrical cirrophores bulbous basally, with short subulate styles, shorter than neurosetae; dorsal tubercles indistinct (Fig. 1A, D; Day 1975: fig. 1m).

Bilobed prostomium with bulbous ceratophore of median antenna in anterior notch, style cylindrical, with tapered tip; slightly shorter lateral antennae inserted on anterior extensions of prostomium; 2 pairs of large eyes; tentaculophores lateral to stout palps and prostomium, with 2 pairs of dorsal and ventral tentacular cirri, similar to median antenna (Fig. 1A; Hanley & Burke 1990: fig. 7E). Segment II without nuchal fold, with first pair of large elytrophores, biramous parapodia and long ventral buccal cirri; neurosetae differing from following neurosetae, more slender, with more numerous rows of spines, tapering to sharp tips (Fig. 1A, B; Hanley & Burke 1990: fig. 7E, G, J).

Biramous parapodia with small, conical notopodium on anterodorsal side of large neuropodium, with subconical presetal lobe and shorter rounded postsetal lobe, deeply cut dorsally and ventrally (Fig. 1C, D). Notoetae numerous, short, extending only slightly beyond neuropodium, slender, densely serrated, few short, tapering to blunt tips and numerous long ones tapering to capillary tips (Fig. 1C, E). Neurosetae relatively few (8–12), all similar, stout, with few spinous rows (4–5) and slightly curved unidentate tips (Fig. 1F; Haswell 1883: pl. 9: fig. 7; Augener 1927: fig. 3c, d; Day 1975: fig. 1q; Hanley & Burke 1990: fig. 7,1).

*Distribution.*—Western Australia: Rott-nest Island, under limestone rubble, 6–7 m (Hanley 1993); South-West Australia: off Albany, low water under rocks (Hanley & Burke 1990; Eastern Australia: Port Jackson, New South Wales, shallow water and

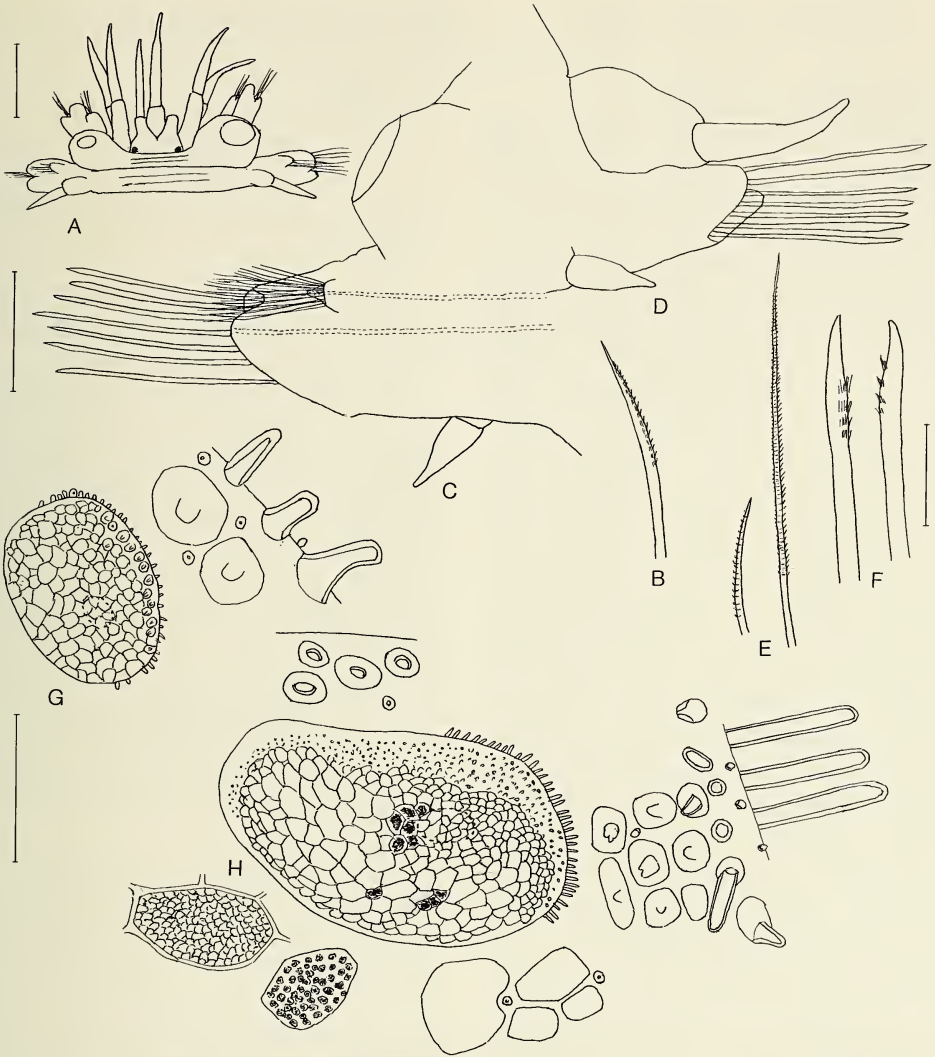


Fig. 1. *Augenerilepidonotus dictyolepis*, paratype of *Lepidonotus dictyolepis* (AMS 11274): A, Dorsal view of anterior end, prostomium partially withdrawn in segment II, with posterior eyes hidden from view; B, Neuroseta from segment II; C, Right middle elytrigerous parapodium, anterior view, acicula dotted; D, Right middle cirriferous parapodium, posterior view; E, Short and long notosetae from same; F, Two neurosetae from same; G, Right first elytron, with detail of lateral border; H, Right middle elytron, with detail of different areas. Scales = 0.5 mm for A; 0.1 mm for B, E, F; 0.3 mm for C, D; 1.0 mm for G, H.

under stones and algae (Haswell 1883, Augener 1927); Tasman Sea: Norfolk Island, 50 m, coralline sand (Averincev 1978, Vinogradova et al. 1978); and Coral Sea: New Caledonia (Rullier 1972).

*Remarks.*—*Lepidonotus aeololepis* Haswell, 1883, from Thursday Island, Australia, from under rocks at low tide, is ques-

tionably referred to *A. dictyolepis*. The type specimen in the Queensland Museum is lost (Day & Hutchings 1979:89) and not available for study. The description and figures are deficient but the elytra, showing polygonal areas, and the stout neurosetae with few spinous rows and entire tips, agree with *A. dictyolepis*.

*Olgalepidonotus*, new genus

*Type species.*—*Lepidonotus kumari* Rullier, 1970. Gender: masculine.

*Diagnosis.*—Body short, flattened, subrectangular, with 26 segments (first achaetous). Elytra and prominent elytriphores 12 pairs, on segments 2, 4, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23. Elytra large, overlapping, covering dorsum, without long fringe of papillae, densely covered with rounded microtubercles and micropapillae. Dorsal cirri on non-elytrigerous segments, with long cylindrical cirrophores and tapered styles extending to tip of neurosetae. Prostomium bilobed, with 3 antennae, 2 palps, and 2 pairs of eyes; median antenna with oval ceratophore in anterior notch of prostomium; lateral antennae inserted subterminally on anterior continuations of prostomium, on same level as median antennae but with line of separation from prostomium. First or tentacular segment not visible dorsally; tentaculophores lateral to prostomium, achaetous, with 2 pairs of dorsal and ventral tentacular cirri, without distinct facial tubercle. Second segment with first pair of elytriphores, biramous parapodia, and long ventral buccal cirri. Biramous parapodia with small conical notopodia on anterodorsal faces of larger neuropodia; neuropodia with subconical presetal acicular lobe and shorter rounded postsetal lobe. Notosetae all one type, much more slender than neurosetae, delicate, finely spinous, tapering to capillary tips. Neurosetae not usual *Lepidonotus* type, rather slender, wider basally, tapering to sharp tips, mostly bare, upper ones with few spines (4–5). Ventral cirri short, subulate. Pygidium with anal ridge and pair of long anal cirri. Nephridial papillae rather long, cylindrical, beginning on segment 8. Pharynx (?) not extended.

*Etymology.*—The genus is named for Olga Hartman, who contributed so much to the study of the Polychaeta.

*Remarks.*—*Olgalepidonotus kumari* differs from the usual *Lepidonotus* types of setae, having all long capillary notosetae and

stouter neurosetae mostly bare, with subterminal enlargements, tapering to sharp tips.

*Olgalepidonotus kumari* (Rullier, 1970),  
new combination  
Fig. 2

*Lepidonotus kumari* Rullier, 1970:221,  
Figs. A–I.

*Material examined.*—Malaya, Port Swettenham, in mangrove, 30 Nov 1968, A. S. Kumar, collector, holotype (LZA).

*Description.*—Body with 26 segments, 9 mm long, 4.5 mm wide with setae. Elytra large, overlapping, covering dorsum, last twelfth pair extra wide, covering posterior five segments (Rullier 1970: fig. A). Elytra oval to subreniform, densely covered with rounded, colored microtubercles and short micropapillae on surface and posterior and lateral borders (Fig. 2H; Rullier 1970: figs. H, I). Elytriphores large, bulbous (Fig. 2A, D). Dorsal cirri with long cylindrical cirrophores on dorsoposterior faces of parapodia, with styles extending about to tips of neurosetae; dorsal tubercles slightly inflated (Fig. 2E).

Bilobed prostomium with deep red pigmentation on lateral margins and bases of antennae; median antennae with rounded ceratophore in anterior notch of prostomium, with style about as long as stout tapered palps; lateral antennae inserted subterminally on anterior extensions of prostomium, on same level as median antenna but with line of separation, appearing as distinct ceratophores, with styles shorter than median antenna; eyes rather large, anterolateral pair and slightly smaller posterolateral pair; tentaculophores lateral to palps and prostomium, with dorsal tentacular cirri similar to median antenna and slightly shorter ventral tentacular cirri (Fig. 2A; Rullier 1970: fig. B). Segment II without nuchal fold, with first pair of large elytriphores, biramous parapodia, and long ventral buccal cirri, similar to tentacular cirri; notosetae similar to following; neurosetae differing from following, more slender, with spinous rows,

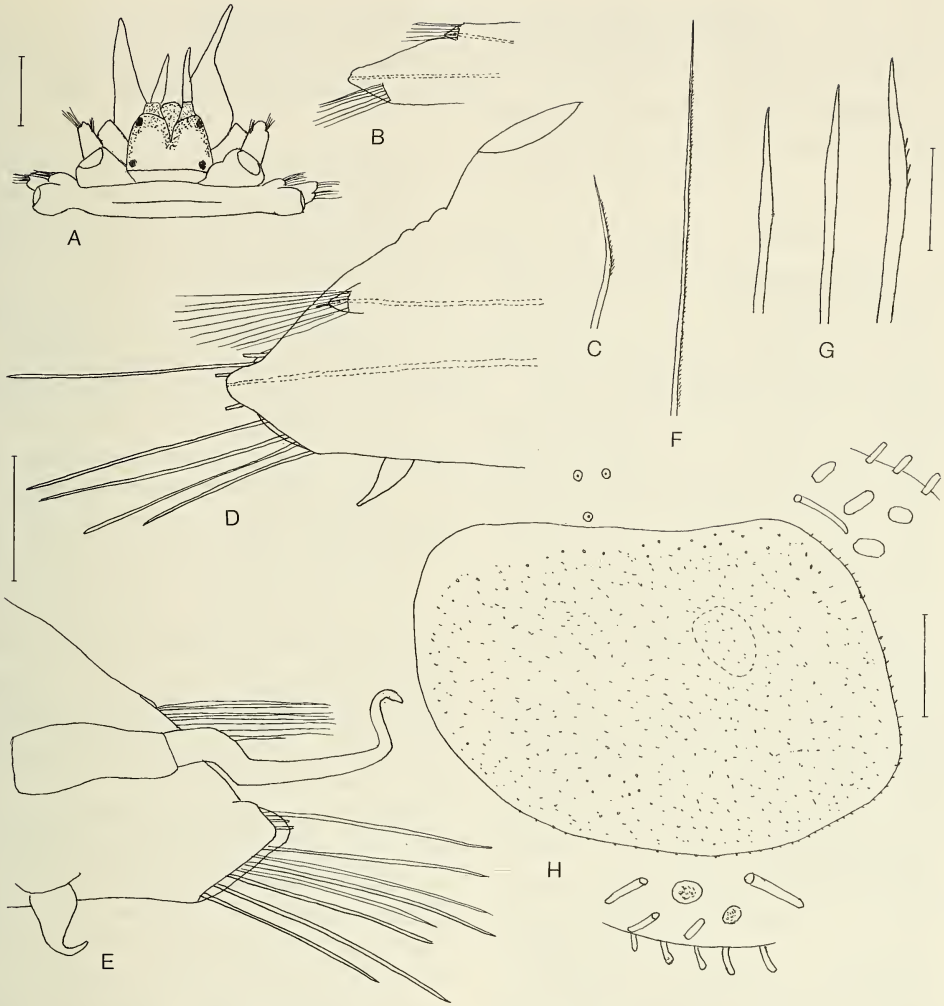


Fig. 2. *Olgalepidonotus kumari*, holotype of *Lepidonotus kumari* (LZA): A, Dorsal view of anterior end, missing: styles of median antenna, right and left dorsal and ventral tentacular cirri, elytra of segment II and styles of dorsal cirri of segment III; B, Right parapodium of segment II, elytrophore and ventral buccal cirrus not shown, acicula dotted; C, Neuroseta from same; D, Right middle elytrigerous parapodium, anterior view, acicula dotted, some neurosetae broken or missing; E, Right middle cirriferous parapodium, posterior view, some neurosetae broken or missing; F, Notoseta from same; G, Lower, middle and upper neurosetae from same; H, Right middle elytron, with detail of microtubercles and micropapillae. Scales = 0.5 mm for A; 0.3 mm for B, D, E; 0.1 mm for C, F, G; 0.5 for H.

and tapering to delicate tips (Fig. 2A-C; Rullier 1970: fig. B).

Biramous parapodia with short, conical notopodia on anterodorsal sides of large neuropodia, with subconical presetal acicular lobe and slightly shorter, rounded postsetal lobe, notched dorsally (Fig. 2D, E). Notosetae much more slender than neuro-

setae, single type, delicate, finely spinous, tapering to long capillary tips (Fig. 2D, F; Rullier 1970: fig. D). Neurosetae rather slender, wider subdistally, tapering to sharp tips, few (4-5) supraacicular ones, with few (4-5) spinous rows, and more numerous (15-20) subacicular neurosetae, smooth, without spines, lower ones with slightly

curved tips (Fig. 2G; Rullier 1970: figs. E–G). Ventral cirri short, subulate (Fig. 2D, E).

*Distribution.*—Indian Ocean, Port Swettenhan, west coast of Malaya, in mangrove swamp.

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